Statewide Standard Treatment Protocol

Public Safety Agencies Standing Orders

For Self Administered Nerve Agent Antidote Program

DELAWARE HEALTH AND SOCIAL SERVICES
Division of Public Health
Public Health Preparedness Section

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Purpose

To outline the process by which Public Safety Agencies may safely train, acquire, maintain, use, and discard of MARK I kits with medical oversight. The decision to participate in the MARK I kit program is on a voluntary basis however; those agencies wishing to participate must comply with the protocol.

Justification

During an act of chemical terrorism or during a hazardous materials incident, Public Safety Agency providers may be exposed to harmful, even fatal doses of nerve agent or similar compounds. In these situations, providers may need to administer life-saving medications via single dose self-administration kits, to themselves or fellow providers in a rapid time sensitive fashion.

Protocol

1. Participation in this program is voluntary. Once the agency receives the MARK I kits, their usage must only be under the direction of this protocol, and compliance is mandatory.
2. Any Public Safety Agency wishing to participate must notify the Delaware Office of Emergency Medical Services (OEMS) in writing of their interest. The agency must outline how it plans to distribute, maintain and monitor the MARK I kits. This includes a plan for QA/QI on their usage and disposal.
3. Upon the approval of the agency by OEMS the agency must undergo a training module, approved or offered by OEMS, on the maintenance and appropriate use of the MARK I kit.
4. The OEMS will issue the MARK I kits to the agency based on the needs of the agency.
5. The agency is expected to keep the kits current and in good condition. Broken or expired kits are to be returned to OEMS for replacement.
6. Any usage of a MARK I kit must be reported to the OEMS or county medical director within 24 hours.
7. An agency may discontinue the usage of MARK I kits at any time by returning them to OEMS.
8. Failure to comply with the protocols or maintain the kits in working order may result in discontinuation of the agency in the program.

Nerve Agents

Background:
Nerve agents are the most toxic of the known chemical agents. They are hazards in their liquid and vapor states and can cause death within minutes after exposure. Nerve agents inhibit acetylcholinesterase in tissue, and their effects are caused by the resulting excess acetylcholine. Nerve agents are considered to be major military and terrorist threats. Common names for nerve agents include Tabun (GA), Sarin (GB), and Soman (GD), GF and VX. Nerve agents are liquids under normal temperature conditions. When dispersed, the most volatile ones constitute both a vapor and liquid hazard.

Suspicion/Detection:
- Multiple patients in one area with sudden development of very small pupils, eye pain, uncontrollable runny nose, difficulty breathing, convulsions, drooling or paralysis.
- May smell odor of fruit or fish but this is highly unreliable.
- Personnel are to extricate immediately themselves from the area and initiate personal protection and care if needed.
- With suspicion of nerve agent, notify the communications center immediately and contact medical control as soon as possible.

Exam:
- ABCs
- Level of Consciousness
- Vapor
    - Small exposure: very small pupils, eye pain, uncontrollable runny nose, more rapid breathing or mild difficulty in breathing.
    - Large Exposure: loss of consciousness, convulsions, very slow or absent breathing, loss of muscle tone, large amounts of secretions from eyes, nose and mouth, and very small pupils.
- Liquid
    - Small to moderate exposure: localized sweating, nausea, vomiting, feelings of weakness
    - Large Exposure: Sudden loss of consciousness, convulsions, very slow or absent breathing, loss of muscle tone, large amounts of secretions from eyes, nose and mouth.

Treatment:
- Protection with appropriate Personal Protective Clothing for vapor and liquid.
- Provider:
    - Administer MARK I kit (Atropine and Pralidoxime) immediately with any symptoms. If provider has mild symptoms of very small pupils or uncontrollable runny nose, self-administer one Mark I kit and retreat. If symptoms worsen or do not improve within 2 minutes, seek evaluation from another provider.
    - If on further evaluation, the provider is found to have more than mild symptoms, see below.

- **General Guidelines:**
    - **Mild** (very small pupils and uncontrollable runny nose) Give one MARK I kit. Seek ALS for further evaluation.
    - **Moderate** (above plus more rapid breathing or mild difficulty breathing) Give 2 MARK I kits. Seek immediate ALS for further evaluation and treatment.
    - **Severe** (severely labored breathing, very slow or absent breathing, blue or purple color of the skin (cyanosis), unconscious with pulse, or uncontrollable muscle twitching) Give 3 MARK I kits, and maintain an open airway with adequate control of neck movement. If available, administer 10 mg Valium via Autoinjector. Seek immediate ALS for further treatment and assistance with airway management and breathing support.
- Decontamination of skin is not necessary with vapor exposure but remove all clothing to remove trapped vapors.
- Decontamination of skin exposure: Removal of all clothing as rapidly as possible will lessen the amount of toxin absorbed. Full decontamination of skin will be necessary.

Treatment of the Public:

- Agencies authorized to carry Mark I kits for self-protection can provide aid to the public when authorized directly or indirectly (through a Delaware paramedic) by an on-line Medical Control physician.
- Providers will be given a laminated wallet sized card with signs and symptoms of nerve agent exposure for rapid reference and the appropriate treatment of varying levels of severity.
    - Signs and symptoms will be communicated to the on-line physician by the on-scene providers.
    - The on-line Medical Control physician will authorize the use of Mark I kits (if appropriate).
    - The kits will be obtained from existing supplies or supplemental supplies, which can be released in mass casualty situations.
- Existing protocols for self-treatment of providers will be followed when treating adult patients with suspected exposure
    - The number of Mark I kits utilized will be the same as in the self-treatment protocol.
- Pediatric patients (less than or equal to age 12) will be treated using pediatric Mark I kits (if available)
    - The number of pediatric Mark I kits utilized will be identical to the number recommended for an adult with corresponding symptoms however, these kits contain a lower dosage of medication.
    - In the event pediatric Mark I kits are not available, patients with severe symptoms should be given one adult Mark I kit. Those with mild or moderate symptoms should be evacuated and an alternative method to deliver medication should be attempted.